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ABSTRACT

Designed to provide information to administrators at Housatonic Community College, Connecticut (HCC) on the status of writing-across-the-curriculum (WAC) programs, this report presents an overview of WAC, strategies for its implementation, and examples of WAC programs currently in existence. Introductory sections present a brief history of and a rationale for WAC, indicating that it emphasizes the process of writing as a valuable tool for learning in any discipline, and that it stresses the organizational skills and course content learned through the writing process over grammar and syntax. Next, general suggestions are put forth for teaching WAC courses, such as using traditional formal papers, essay exams, written homework, and journals or class commentaries, as well as the need for instructors to make their assignments as specific as possible and tie them closely to course objectives. Specific techniques are presented for science, math, business, social science, and non-English humanities courses. Then, 12 examples from an informal study of WAC programs at 80 colleges and universities are described, indicating that all the programs have initiated courses across a broad spectrum of disciplines and all have proved beneficial to both students and faculty. After listing 10 steps for evaluating WAC programs, the paper discusses methods to implement a program, including the use of faculty workshops, writing consultants, a college-wide writing committee, or writing labs for all students. Finally, recommendations are provided for the success of the WAC program at HCC, including the use of the Center for Educational Services as a core for the program, the establishment of a college-wide writing committee if necessary, and the appointment of a director to coordinate the program. Appendixes (the bulk of the document) include sample writing assignments, course syllabi, and a 176-item bibliography. (VVC)

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ED310828

TO: Dean James Link

FROM: Peter Ulisse

RE: Title III Report on Writing Across the Curriculum

Enclosed you will find my report on Writing Across the Curriculum detailing my involvement with the process from September 1987 to August 1988. As you will be able to perceive, Writing Across the Curriculum is a growing national movement which has significantly improved the quality of education in colleges and universities where it has been utilized. Hopefully Housatonic Community College will receive the necessary administrative support which is needed to allow this program to succeed.

JC890436

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WRITING ACROSS THE CURRICULUM

BRIEF HISTORY

In a sense Writing Across the Curriculum (WAC) is not new. Medieval universities recognized the importance of writing as a basis for all forms of education; John Dewey made a case for its interdisciplinary functions using writing to analyze, solve problems, state opinions, and argue points. The current emphasis, however, dates to the early 1970's and places like Beaver College which began to emphasize writing's not being used solely as a measure of how much knowledge students accumulate (i.e essay exams, formal papers), but also as a way of providing an effective means of actually learning, thinking, and reflecting about ideas. As such, the "process" of writing encourages students to be active learners, not passive listeners, and forces faculty to re-think teaching strategies. It emphasizes the fact that writing in any course will help students to learn, discover connections otherwise unseen, express understanding, raise questions, and find answers. And it also recognizes the fact that improving student writing can never be accomplished if limited to certain courses traditionally taught by members of English departments.

RATIONALE AND PAST PROBLEMS

In the past writing, where it has been used in disciplines other than English, has served the narrow function of communicating " information" from student to audience (teacher) with the sole purpose of conveying facts. Recently, however, both psychologists and educators have emphasized the "process" of writing as a valuable tool in the learning of any discipline. There is something about the planning, organizing, and evaluating of subject matter which allows students to understand thoughts which would have otherwise remained inaccessable without writing. Used in high schools (Milford, CT. recently adapted a policy requiring

Writing Across the Curriculum in its public schools), technical schools, and colleges throughout the country, WAC has changed the perception of writing emphasis from a rationale for eliminating poor writers to its more positive aspect of being central to the academic process. As one political scientist faculty member has stated(Forum, October 1984):

> There is something about the act of writing that imposes a kind of discipline that is absolutely crucial to the end of the mind. . . writing teaches a kind of logic the student will not learn by speaking.

Through its use as a "visual" record of thought, writing therefore enables the student to make "connections" in a more efficient manner which, in turn, stimulates the creation of new thoughts not initially present. Sociologists, historians, chemists, and mathematician across the country are coming to the conclusion that students have not mastered course material if they cannot write about it. As Greg Walters, Associate Vice President for Academic Affairs at Montclair State College has stated(Forum):

> At last we are recognizing that writing ability is not a series of discrete skills to be isolated and taught through drill and rote memory, but a complex and holistic skill deeply rooted in the process of learning.

BENEFITS OF PROGRAM

Study after study have pointed to the benefits of the program both for faculty and students even though each may have had some doubts in the beginning. Once some of the initial objections are overcome (i.e. misconception that "it's not my job"), faculty involved describe their experiences as exciting and professional, leading to enhanced learning in their courses. They enjoy the comradery of working with faculty in other disciplines. Students in WAC type courses seem to be willing to take more risks in class and ask more questions after having spent the time collecting thoughts on paper. A study at Johnson State College in Johnson, Vermont reported through student evaluations that over 90% felt they had learned course material better as a result of having written about it and a

Harvard report demonstrated that seniors in the natural sciences did not write as well as their freshman counterparts who had just completed WAC type programs. As a health career student at Bunker Hill Community College pointed out(In Print, Fall 1986):

> . . . . to conclude, I think that the writing assignment is an excellent method to get a student to understand a subject better. By doing it, she's forced to do some research on the topic that will be discussed. It also helps the instructor to see what level of understanding the students are grasping the subject. I enjoy doing them a lot and just wished that other instructors would use the same method.

As an additional benefit, Writing Across the Curriculum seems to enhance the reputation of the institution using it and aids in student retention.

BASIC CONCEPTS AND TECHNIQUES

Before listing some specific techniques that instructors may use in order to improve writing and content learning, we should relate a few concepts basic to any Writing Across the Curriculum program. First, although grammar and syntax are important(hence stressing the value of clear, written communication in all areas), they are not as crucial to the success of a WAC Program as the organizational skills and course content which a student "learns" as a result of the writing "process." As such, instructors should make their assignments as specific as possible, have them tied to course objectives, and guide students in the direction and focus of such an assignment. In other words, while possibly assigning fewer and shorter papers, instructors should be involved in the development of ideas relevant to particular aspects of the course with more opportunity for students to work on several drafts of the material. Faculty in non English courses should not be threatened by such assignments, for they are qualified to read a written response in their discipline according to their own guidelines and expectations.

Although this report will follow with several teaching suggestions for particular courses, the following examples of WAC are more general and may be utilized in most colleges and high school courses.

1. Traditional formal papers-assigned by the instructor with specific regulations as to length, style, and format. Papers, research or otherwise, should be tied to course content.
2. Essay exams- very useful in enabling the instructor to determine how well students have mastered course content. Also, the very studying for such exams forces students to realize concepts and connections they might not otherwise have seen had they been only asked to memorize. Essay exams may even be utilized as first drafts (see Professor Kindilien's article) allowing students to earn a higher grade through re-writing, thereby allowing them more insight into the process of writing itself.
3. Written homework- to be turned in and checked but not necessarily graded. The very act of putting what was read on paper seems to improve student concentration and retention.
4. Summaries- of newspapers, journals, or magazines assigned to encourage students to read for concepts as opposed to just words.
5. Five minute responses- an excellent way to discover how much a student is learning and to get involved in the writing process. At an apropos point in a particular class the instructor stops and asks students to write a 5 to 10 minute response to a previous night's reading assignment or to jot down questions they may have concerning the lecture in progress. The student may also record insights, suggestions, or possible quiz questions. This particular exercise has been shown to improve students' attention while encouraging them to "think" about the material in a new way, often resulting in the asking of questions they didn't even know they had.

6. Evaluation- periodically throughout the semester students are asked to spend a few minutes writing about the class itself: what they have learned, what they are confused about, where the class is heading, etc. This is often beneficial both to the student and the instructor.
7. Journals/Notebooks/Learning Logs- probably one of the best devices for enhancing student learning while at the same time encouraging students to write more. There are many different formats for keeping these, but basically journals are informal pieces of writing kept by the student on anything related to the course- main points of lectures or reading assignments, a record of what he does or doesn't understand, a chronology of events, labs, etc. These may be used to preview new material, review old, for classwork, homework, intergrating with material from other classes, personal reflection, lead-in to quizzes and exams, recognizing opposing arguments and the like. Journals should be collected periodically by the instructor but need not be graded and often excerpts can be read(anonomously of course) to the class. There has not been a college discipline which has not been able to utilize this technique. Students, after some initial complaints, often look forward to doing them- it's like a diary and they realize it helps them to get organized and improve their grades.
8. Commentaries- on field trips- what did they observe? How did it increase their knowledge of the course?
9. Case studies- where relevant.
10. Laboratory reports- mostly science and languages, but almost any class may use a laboratory type setting for group work, individual projects, etc.

In accessing any of the above, the instructor may want to select and read to the class early pieces of writing with an eye on the development of ideas rather

than on correcting errors. The faculty member may often confer with students at these early stages. It's also often helpful to have students read and comment on each other's work since "teaching" is one of the best ways to learn and they often find it easier to criticize another's work rather than their own.

SPECIFIC TECHNIQUES FOR PARTICULAR COURSES

The following list is neither exhaustive nor exclusive. It does not dictate and an instructor should not feel limited by it- his own originality and creativity should be the only boundaries. Still, the following examples do provide a framework for Writing Across the Curriculum by showing what faculty in non English courses have done at other colleges throughout the country. I have divided them into the overall categories of Science, Math, Business, Social Science, and Non English Humanities Courses. Some of the techniques may "overlap" as is often the case in WAC.

SCIENCE

1. Any Science lab- record process before, during, and after an experiment- what do I hope to accomplish?
2. Field trip- as with Art, jot down personal remarks, observation, missions.
3. Summarize a process just discussed in class- e.g. digestion cycle.
4. Journal- can be used for class, homework, and especially labs- when finished with an experiment, record the process you used, results you found, implications you've drawn. Journals may also record thoughts and feelings, organize ideas, pose questions. They may be used at the beginning or end of a class. (See Appendix 1)
5. Case histories- works especially well in nursing classes.
6. Summarizing- a film or an article. Used for all science classes. (See Appendix 2)
7. Abstracts from popular magazines and journals- used in physics and others.

MATH

1. Logs used by students in which they write the steps they took to solve a particular mathematical problem. (See Appendix 3)
2. Summarize the process used to solve problem X.
3. As with any career program, write about the unit just finished- what do you know about it, how does it tie in.
4. Write textbook concepts in a logical manner- play role of "teacher" and write to a mythical "friend" who missed the class. Prepare some kind of lesson plan or do a formal paper on the life and work of a mathematician. (See Appendix 4)

Business

1. Management and Economics- students write about concepts learned and how they affect "real" life situations and problems of human behavior.
2. Intro to Business - students read a business topic of their own choice- analyze writer's intent based on course and own thinking of the topic.
3. Marketing- students learn to market services to potential customers through memos and short written assignments. They confirm meetings, indicate feasibility of a report on recommendations, etc.
4. Finance- logs on personal connection to material - e.g. equate problems on financing a company with operating one's own household, make personal decisions on how an individual's financial assets and liabilities can best be handled, just as a business financial manager must.
5. Computer literacy- one class wrote on computers and how they affect our lives, another previewed and rated software objectively then wrote a few paragraphs stating <u>why</u> they rated items in a particular way. (See Appendix 5)
6. Accounting - analyzing financial statements of different companies. Which would you buy stock in and why? How would you respond to the IRS?

SOCIAL SCIENCE

1. Child Care- portfolios containing use of materials in classroom and reasons for including these, records of children, description of seminars and workshops, daily schedule of activities, and examples of culturally relevant materials. Also paper on an Early Childhood facility to include type of facility, description of observed classroom, description of teachers and children, purpose of program, etc. Do this for two papers, then a third one comparing the two stating which you preferred and why. Some classes have done short writing on goals, others on "childhood passions," something they cared about deeply.
2. Criminal Justice- police accident reports, legal memoranda, inmates' classification summaries and the like. Essays on plea bargaining and work of prosecution. Take a social problem & relate to criminal justice system.
3. Government- read newspapers, analyze what you read, form objective opinions of news items or editorial comments, then write about those opinions using a strong central thesis with supporting evidence. Another assignment might utilize reading notes, lectures, and logs to determine the role certain 19th century leaders played in government by drawing analogies to 20th century leaders arriving at your ideas on what constitutes a good leader.
4. History/Anthropology- formal papers, logs using lecture notes in one column with personal connections in second. (See Appendix 6) Focus on an "artifact"- identify the ones an archaeologist might discover- write about what can be learned of a civilization based on such an artifact- think creatively of the past.
5. Psychology- select a subject from the syllabus and write a short paper using concepts studied so that another student can understand you. Comment on an article from Psychology Today summarizing and giving value judgments. Keep journal of readings divided into 2 columns whereby you keep actual notes

on one side and put down feelings, experiences, and opinions on the other.

6. Sociology- use sociological concepts to describe students' personal experiences and critically evaluate how they adjust to multiple role demands on a daily basis. (See Appendix 7)
7. Human Services - interview agencies and present conclusions in logical manner. Work on writing contacts, code of ethics.

NON ENGLISH HUMANITIES

1. Music- write about music in your life- sort of a personal history including any solos or recitals you participated in; listen to a piece of music and relate to its melody, harmony, rhythm, dynamics, and tempo; write an essay on why music is important in your life or a summary of a concert you attended recently.
2. Art History- formal papers, summaries of slides, films, trips.
3. French(any foreign language)- look at library filmstrips and brochures on travel to France, then write a very personal account of such a possible trip- demonstrate your ability to organize and plan as well as use imagination.
4. Philosophy- read text and take notes on a moral dilemma discussed in class and write a 3 page essay on the discussion.

In addition to all these examples, many non English teachers also find it helpful to pass out very precise writing instructions as exemplified in Appendix 8.

WAC: A DOZEN EXAMPLES

Although over 80 colleges and universities were contacted and material was obtained from almost half of these, the following twelve will serve as good examples of the wide variety of WAC programs now in existence. What they all agree on, whether a prestigious four year university or a community college, is that Writing Across the Curriculum does work and that both students and the college benefit tremendously where such programs exist.

1. Southern Connecticut State University- has instituted "L" courses (most colleges call these "W" classes) after EN 101 whereby writing is added to particular existing courses chosen by the various departments. A student "must" take a certain number of these to graduate.
2. Massasoit Community College- began informally 6 years ago but now utilizes WAC in most courses including ESL, Film, Management, Philosophy, Sociology, History, Business, Social Sciences as well as almost all Humanities- over 340 Students are now actively involved. Faculty view writing as a "process" integral to learning and student evaluations are used to constantly monitor the program. Much of the success at Massasoit stems from the several members of the English Dept who are given release time to help staff their Academic Resource Center(our CES) and who become actively involved in tutoring and providing writing services to other departments. They may also visit individual classes.
3. Stockton State College- writing is totally interdisciplinary. Accordingly, English faculty do "not" teach writing as such but rather language and Literature. Writing is "assumed to be the function of all disciplines" and is taught as part of each discipline. An English faculty member participating is paid $500. Placement is considered highly important.
4. University of New Haven- interdisciplinary in certain select courses. For example, a History and an English course may be designated on the schedule so a student will sign up for "both" courses. Skills and assignments will then be interrelated according to their general philosophy: "taking effective notes whether on lectures or on readings, learning to put into one's own words the significance of what one has heard or read, responding to that significance in writing- all these and comparable activities go to the heart of college work." Faculty often are involved in planning sessions and objective evaluation is given at the end in both designated and non designated

history courses to measure the effectiveness of the program. Students surveyed have appreciated being in such designated courses.

5. Beaver College- cited for its program in the January 1984 N.Y. Times. An evaluator of its program referred to "a unified body of academics speaking the same language about the problems of various disciplines" calling the program "miraculuous." Indeed, Beaver College has been THE innovator in WAC programs across the country and Elaine Maimon, who was instrumental in beginning the movement over a decade ago, is now a Dean at Brown University.

   Beaver College has 5 precepts which underlie their program.

   1. Writing, like learning itself, is not an entity but a process.
   2. Writing is not merely a means of communicating to others what has already been mastered, but is also a way to "learn." As such, it is "a critical tool of invention and discovery central to all disciplines."
   3. WAC is influenced by working in groups.
   4. Writing manifests fundamental processes within each discipline, hence the responsibility of that discipline.
   5. Students must learn the conventions and aim of an audience in each discipline. The purpose is "not" to make all faculty English teachers.

6. Brown University(and most of Ivy League schools)- "all" students in "all" courses are expected to perform at a very high level of writing competence. If they are found to be incompetent in writing at any level in any course students are not allowed to complete the course until they get extra tutoring and can demonstrate they have solved the problem. There is much work with peer tutoring in a lab type situation. Composition itself is not taught: "Composition alone is not a subject. Teaching composition cannot be disconnected from substantial inquiry into real subjects."

7. Suffolk University- students must pass a certain number of writing courses in all disciplines under the heading "All College Requirement." The department itself determines which courses should be designated writing (W) courses. Big emphasis on working to increase faculty awareness and collaborative efforts. Workload of faculty is reduced if over 25 students are enrolled in a designated writing course. Writing usually takes the form of the following: short essays, research papers, laboratory reports, essay exams, written homework, and journals.
8. Lorain Community College- faculty workshops conducted on such topics as setting up a writing assignment, using journals, etc. At first certain faculty objected stating it was not their function, and it was too time consuming. Eventually, however, most came to realize that writing became an effective way for students to better learn their courses and synthesize material. Workshops are now a regular part of keeping faculty in other disciplines involved.
9. Simmons College- writing for all courses such as Literature: Literary criticism; Biology: observations of nature; Manangement: people in activities in organizations; History: chronological narratives built from source material which historians use. Faculty attend workshops on such topics as writing assignments for particular disciplines, individual conferences, ways other than formal writing to make writing successful, and grading criteria. The college as a whole seems committed to four particular types of writing assignments which have been successful.
    1. Five Minute Topics- a very useful tool which can be used in <u>any</u> course in an almost infinite number of ways. For example, students may write on summarizing what they know, reactions to this week's

reading, what was most difficult about the last lesson, or they may outline basic ideas of the last discussion, a discussion to come, something preventing the student from concentrating- almost anything. This writing is not graded, though it may be collected at times. Students are told this is "free writing" with the ultimate goal that this is writing the student does for "himself," in order to think and learn. Very often students discover they know more than they think or at least can express better what they don't know. Students can't be passive in this exercise and the benefit for the faculty is "to get the student's mind actively focused on what the instructor wants to teach."

2. Journal- records thinking of course material guided by questions provided by the instructor. Very often it's in response to a reading assignment thereby also getting the student to "read" better. Students do these a minimum of 30 minutes per week in all classes- good way of finding out what a student knows or doesn't know and connects the instructor to "all" students in a very personal way. These are periodically collected, but not graded.
3. Dialectical Notebook- On side A students put down notes from passages and Side B responds to the notes by summarizing them, revising, asking questions, etc. Instructors involved say it's especially good for science courses encouraging "accuracy" and "speculation."
4. Team Writing- seeing how other minds work on the same process- important to later life when much of work is collaborative. Teacher is final evaluator of the project.

10. New Hampshire Technical Institute- mainly for Engineering students. Require 1 to 2 formal papers in each class outlining students' projects for the course and are due well before mid semester (e.g. one student converted running water near his house into electrical energy by building

a generator in his basement). Students then submit a "progress report" several weeks later to followed by a formal report. Multiple "drafts" are the key and members of the English Department often assist, though this is not always the case.

11. Tufts University- Courses in all disciplines are designated as W Courses with intensified writing and a writing director. Training sessions emphasize writing as a mode of "learning." More informal writing and more drafts are encouraged as opposed to assigning longer research type papers. Yale and the University of Massachusetts are other schools which emphasize the W course (any course in any discipline can be so designated) as opposed to schools like Georgetown and the University of Vermont which "saturate" the curriculum with WAC teaching emphasizing "methods" rather than particular courses.

12. Bates College- Bates has been involved in intensified writing for over seven years. They have no freshman writing courses as such, but are committed to the idea that writing is an intregal part of all fields. As such, all departments participate. Everything is co-ordinated from their Writing Center(similar to our CES- most colleges seem to insist on the necessity for this central organization) which is staffed by professional writers and tutors. There are also some seminars which are content oriented. The Center helps students with such tasks as analyzing assignments, clarifying ideas, reasoning clearly, providing support for thesis, improving sentence clarity, building editorial skills, and the like.

EVALUATION PROCEDURES

The following are some ways which Writing Across the Curriculum programs may be evaluated. Almost all sources insist, however, that the only "measure" of success for the first several years be in the nature of increasing <u>faculty involement</u>. Colleges report that "time," "patience," and "administrative support"

(financial and otherwise) are probably the three biggest influences on whether or not a WAC program is "maintained" instead of just something to be tried and disguarded. Faculty should be able to determine for themselves which writing tasks are important for a particular course and students should be involved at all levels. Once all of this has been accomplished (minimun 3 years), then the following may be utilized.

1. Writing Sample turned into faculty.
2. Faculty attitude surveys.
3. Student attitude surveys.
4. Collection of documents(assignments, syllabi) to show impact of program.
5. Faculty interviews specifying kinds of writing used, perceptions of student writing, attitude to workshops.
6. Student interviews.
7. Faculty and student case studies.
8. Outside evaluation not necessarily recommended but possible once a "program" has been established for several years.
9. Comparative- to students "not" involved in WAC type courses.
10. Self evaluation by participating faculty and students as to the worthwhileness of the course/program.

IMPLEMENTATION

There are many possible components to Writing Across the Curriculum and probably just as many ways of implementing. Faculty workshops, follow-up meetings with faculty, use of writing consultants, peer and Master Tutors, a college wide writing committee, informal gatherings of WAC faculty(to communicate without sacrificing integrity of any particular course), outside speakers, writing labs for students- all these and more are possible. What is essential, however, is that there be A writing director or co-ordinator to supervise the program,

visit classrooms, meet with students, evaluate progress, conduct workshops, and do all the necessary co-ordinating which will be necessary. This director should hold regular meetings with faculty involved(who should also be compensated in some way) to discuss assignments and ways writing can be used in a particular course. This is especially necessary to reenforce faculty efforts and to share difficult assignments and evaluation techniques. While it is true that there are particular styles for particular disciplines, there are also many common sense types of techniques which are basic to all disciplines and the workshop would be one of the ways to mutually discover them.

The following are 5 examples of typical workshops.

1. Exploring- have faculty write about student writing problems they perceive as common, serious, or troublesome. They might say something like organization, spelling, interest in a topic, good sentences, supporting an argument, vocabulary. They might supply ways they've dealt with the problem in the past and simply share ideas with others. Solutions aren't necessarily important in this early workshop as long as everyone is "talking," helping each other to understand the complexity of the problem- how some may be "skill" issues, some may be motivational, and others the teacher or the nature of the assignment.
2. Journal Writing- work on how this might be done. Students keep journals for the duration of the course, use them to record thoughts, feelings, insight- catalyst for discussion. Just as in the classroom, the 5 minute technique might be utilized to show how to use journals and how often to read and collect them. This workshop would demonstrate the importance of writing for oneself.
3. Theory- stress reasons for more "expressive" writing as opposed to more formal writing. Expressive writing is close to the thinking process itself and is a great tool both in learning and to overcoming "writer's block."

Workshop demonstrates how instructors can use it to stimulate thought and reduce anxiety.

4. Responding to Writing- ways to evaluate a student work- where are the strong points, weak points, where improvement is needed- and how to inform students of these in ways which will not discourage them. Small groups can be formed to share ideas. There is not necessarily a right or wrong answer here outside of a need for being specific and focusing only on a few problems at a time. Instructors can bring actual pieces of student writing which they consider to be good or bad and they can be discussed as a group.
5. Composing- 5 or 10 minutes of people involved to discuss the whole process. This is "not" critical, but more informative to lesson one's own anxiety and be more empathetic to student writers.
6. Informal gathering throughout the semester.

It should also be emphasized that workshops are strictly "voluntary"(especially if no compensation is provided) and faculty can proceed with writing in their particular classrooms without attending these workshops.

RECOMMENDATIONS

Based on volumes read and dozens of people interviewed, the following recommendations are suggested.

1. Writing Across the Curriculum be encouraged in as many programs as possible as a viable way of both improving writing effectiveness and learning course content.
2. Writing Across the Curriculum be conducted on a voluntary basis possibly moving toward the establishment of <u>required</u> W(Writing,) courses in the future.
3. A college wide writing committee be established should the need present itself.
4. Use of the Center for Educational Services as a core for the program

where students can come for the proper tutoring and educational/writing services.

5. The Center for Educational Services be staffed by peer tutors and faculty familar with the writing process who would be granted appropriate compensation(i.e financial, release time, 20% requirement).
6. Similar compensation be granted to instructors who teach writing intensified courses with an enrollment of 25 or more students to demonstrate that administration is concerned with literacy in all fields.
7. Adequate funding to allow for the books, periodicals, travel, equipment, and consultant services which will be necessary.
8. A Writing Across the Curriculum Director be appointed with a minimum of a one course reduction in teaching load to co-ordinate the program with basic responsibilities as follows.
    a. unify writing at all levels at the college.
    b. continue to read and research the latest material concerning Writing Across the Curriculum.
    c. travel to appropriate sites, workshops, and conferences.
    d. conduct writing workshops for the faculty as needed.
    e. maintain contact with and assist CES in peer and staff tutoring.
    f. meet with individual faculty members concerning writing projects and problems.
    g. visit non English department classrooms to assist instructors in the assigning and explaining of writing projects.
    h. follow up on these activities.
    i. continually evaluate the quality of Writing Across the Curriculum.
    j. bring in outside speakers and events as deemed necessary.

KEY WAC COLLEGES AND UNIVERSITIES

Although material for this report was derived from dozens of additional colleges and universities, the following were particularly useful.

Southern Connecticut State University

University of New Haven

Suffolk University

Simmons College

Massasoit Community College

Brown University

Beaver College

Lorain Community College

Stockton State College

New Hampshire Technical Institute

Johnson State College

Pima Community College

Rhode Island College

University of Rhode Island

North Shore Community College

Tufts University

Washington State University

Bates College

Ithaca College

Townson State University

APPENDIX I

WEEK 1:
1. What do you expect to learn in Earth Science?
2. What are your expectations of me, your teacher?
3. What are your expectations of yourself?

WEEK 2:
1. What did you learn during the past week in Earth Science?
2. What puzzled you?
3. How do you rate your performance during the past week?
4. What is expected of you for Monday?

WEEK 3:
1. What did you learn during the past week in Earth Science?
2. What puzzled you?
3. How do you evaluate your a) behavior and b) study habits?
4. What would you change?

WEEK 4:
1. What did I learn in Earth Science during the past week?
2. What did I not understand?
3. How was my participation?

WEEK 5:
1. What did I learn in Earth Science during the past week?
2. What did I not understand?
3. How was my behavior during the past week?
4. What is expected of me for Monday?

WEEK 6:
1. What did I learn during the past week in Earth Science?
2. What thing did I not understand?
3. Name one action on your part and describe how it positively contributed to the class atmosphere?

APPENDIX 2

Summary "Say Goodbye"

This film goes into great depth on the subject of endangered animals. It tells of their erradication for the mere reason of "being in the way". The prarie dog being one such animal; they are senselessly shot and billed for digging burrows which cattle occasionally step into and break their legs.

It tells also of animals billed for profit, such as harp seal cubs. Which are either shot or clubbed to death for their fur.

As well as mentioning animals killed for sport. A polar bear with cubs was killed only for her coat which would probably end up as a rug.

Such films alway bring out a side in me which is very frightening. I seem to take on a desire to kill those who kill senselessly. To me all animals have just as much right to this world as we, and if we don't stop the killing soon we will be ~~allo~~ alone in the world. The fact is if they go so do we.

I know what you mean

APPENDIX 3

THE INTERACTIVE LEARNING LOG

—Combining the benefits of an information-processing note-taking system and the class journal, the interactive log can:

Encourage fluency, bypass writing anxiety
Pattern and support thinking and learning operations
Provide for immediate classroom emphasis and response
Serve as readymade review and study tools
Adapt to any course content
Actively involve students

Interactive Column	Fact Column
The student writes:	The student takes notes on:
—individual ways of making sense of facts	—lectures
—inferences	—class discussions
—generalizations	—demonstrations
—personal reactions	—films
—personal connections or applications	—reading assignments
—reservations, doubts, objections	—observation assignments
—questions	

(Mitchell Math 80) Lisa Amy MTH150

APPENDIX 4

Newton's Method

Suppose you have a function f(x)=c and you want to find the real roots to this equation, what would you do? If the equation is linear or quadratic there are simple rules that can be used; even equations of the third or fourth degree have special formulas. But, what do you do when you have an equation of the fifth degree or higher? You were out of luck of you were looking for the roots before Newton's time. Fortunately for us, ~~here in the present~~, Newton was able to derive a formula which calculates a closer approximation to the real value of x by using the preceding approximation. The concept Newton used was to first the point where the function crosses the x-axis could be estimated and labeled x_1. X would be the first approximation. The next closser approximation could be found by following the tangent to the point $(x_1, f(x_1))$ until it crosses the x-axis at some point $(x_2, 0)$. Newton then determined that this process could be repeated over and over until $f(x_n)=0$ or ~~the values became~~ very close to 0.

With this concept, Newton was able to explain his method in mathematical terms by using the point-slope form of the tangent line to y=f(x) at the initial approximation x_1 =:

$$y-f(x_1)=F'(x_1)\ (x-x_1)$$

If $f'(x)= 0$ then this line will cross the x-axis at some point (x_2, C). By subsitituting this point into the above equation and

solving for x_2, a new approximation is obtained.

$$x_2 = x_1 - \frac{F(x_1)}{f'(x_1)}$$

If x_2 is viewed as the original approximation, then x_3 is the new approximation. X_3 is determined by replacing x_2 by x_3 and x_1 by, x_2. The equation now yields:

$$x_3 = x_2 - \frac{F(x_2)}{f'(x_2)}$$

only is $f'(x_2) \neq 0$. This equation can then be generalized to find n^{th} approximation.

$$X_{n+1} = X_n - \frac{F(x_n)}{f'(x_n)} \qquad N=1,2,3,\ldots$$

This formula is called Newton's method and can be used to calculate the real roots.

APPENDIX 5

WRITING ACTIVITIES

TEACHER: HUERTA

CLASS: COMPUTER LITERACY

BASIC DESCRIPTION OF ASSIGNMENT: Evaluation of software packages.

OBJECTIVE(S):
Students to examine and draw conclusions about this quality of software.

SEQUENCE OF ASSIGNMENT (including prewriting activities):
See software evaluation form.
1. Select 2 areas from items 1 - 7 on check sheet to focus on.
2. To be written in paragraph form.
3. Revision involving teacher feedback on content, clarity and mechanics.
4. Write final copy.

MATERIALS NEEDED:
Various computer sofrtware packages and evaluation sheet.

AMOUNT OF CLASS TIME NEEDED:
2 class periods which includes software viewing.

TYPE OF FEEDBACK GIVEN TO STUDENTS:
See number 3 on sequence.

TIME REQUIRED OF TEACHER TO SUPPLY FEEDBACK:
5 minutes (at most)

SOFTWARE EVALUATION CHECKLIST

PROGRAM NAME_____ SOURCE_____ COST_____

SUBJECT AREA_____ REVIEWER'S NAME_____ DATE_____

1. INSTRUCTIONAL RANGE

_____grade level(s)

_____ability level(s)

2. INSTRUCTIONAL GROUPING FOR PROGRAM USE

_____individual

_____small group

_____large group

3. EXECUTION TIME

_____minutes for average use

4. PROGRAM USE(S)

_____drill or practice

_____tutorial

_____simulation

_____instructional gaming

_____problem solving

_____informational

_____other

5. USER ORIENTATION: INSTRUCTOR'S POINT OF VIEW

low high

. . . . . flexibility

. . . . . freedom from need to intervene or assist

6. USER ORIENTATION: STUDENT'S POINT OF VIEW

low high

. . . . . quality of direc

. . . . . quality of outpu

. . . . . quality of scree

. . . . . no need informa

. . . . . no disruption

. . . . . simple input

7. CONTENT

low high

. . . instructional focus

. . . instructional significance

. . . soundness of validity

. . . compatibility w/other materials used

excellent set of notes! However, try to move beyond personal comments to essay-like thoughts. It'll help you in preparing papers!

APPENDIX 6

Anthropology 110 T-Tn 10:10 am Kelly Walker

COMMENTS

NOTES

AGE ROLES IN SMALL SCALE AND COMPLEX SOCIETIES.

Human life cycle:

Biology of aging-birth, childhood, maturity, old age, Death. Social ideas about age varies cross-culturally.

Reasons for variations:

1. life expectancy varies preindustrial people

Group	30	40	50
Neandirthal=	80%	95%	100%
Cro-Magnon =	61.7%	88.2%	90%
Anglo-Saxon=	57.4%	81.8%	97.5%

IK-UGANDA old by late 20's due to mal-nutrition. U.S. - men average 74 yrs. Woman average 76 yrs. Because of better sanitation. 19th Century - wash hands, sewer system, medicine.

Human life span-arbitrarily divided up among all cultures the result is that the stages of life cycles differs b/n small scale and complex societies.

STAGES IN SM. SCALE:

1. Infancy - childhood
2. Adolescence
3. Maturity

thoughtful comment

Childhood should prepare you for the future yet there's so much responsibility w/ age they should enjoy while they can!

Did these people actually look old or did they die young from unnatural causes (harsh environment!)?

good Question

interesting observation

I'm not so sure it's better to live longer. Causes problems such as over

APPENDIX 7

Judith Ann Warner
Introduction to Sociology
Short Paper: Pima Student Role Demands:
Daytime Delight or Madness?

Learning Objectives:

1. The student will learn to think abstractly about the personal details of their lives at school, home and work.

2. The student will use sociological concepts to describe their personal experiences.

3. The student will critically evaluate how they adjust to the multiple role demands that they deal with on a daily basis.

Learning Activities:

1. Attending lectures and reading accounts of Pima Community College student experiences.

2. Reading the textbook and noting the concepts that sociologists use to describe life experiences.

3. Analysis of the multiple role obligations that Pima Community College students have through the thoughtful consideration of one's own personal adaptive qualities.

Learning Measurement:

Students will write an essay which discusses the multiple role expectations that they must meet as Pima students, family members, and workers. The student will draw a conclusion about what personal qualities have helped them to adjust to multiple role demands.

Instructions to the Student:

1. Typing:

Students are expected to type this assignment. If you absolutely cannot meet this requirement, speak to me.

2. Format:

Type on one side of the paper and double-space. Paragraphs are to be indented five spaces. All margins are to be one and one-half inches. Type your name and course number in the upper left-hand corner of the first page; staple the pages together and turn the paper in.

3. Length:

Maximum length is three pages. Select the information you present carefully, presenting only your best information and ideas. You may find that focusing on particularly crucial role demands will make your essay more incisive.

4. Revision:

Prior to turning in your paper, be certain that you proofread it, making punctuation changes and spelling corrections. Demand quality of yourself, it's worth it!

Grading Criteria:

A. Content Grade:

Your content grade will depend on your ability to:

1. Recall crucial life experiences and personal qualities that helped you to meet daily obligations.

2. Use sociological terms to characterize your social roles as a student, family member and worker.

3. Effectively write about your personal experiences in a way that delivers a message about what you think is important in life.

B. Collateral Grading: See next page.

Judith Ann Warner
Introduction to Sociology

SOCIOLOGICAL ESSAY GRADING CRITERIA

	Excellent	Satisfactory	Failing (Rewrite)
CONTENT	Sociological concepts defined or used in a manner that is clear	Some mention of appropriate sociological concepts	Absence of sociological concepts used to explain life events: vagueness
	Precise use of sociological concepts with adequate detail on personal background	Background details on one's everyday experience are given, but not always sociologically interpreted	Explanation of life events is underdeveloped, repititious, or accompanied by unrelated details.
	Concise, active writing	Occasional wordiness or sketchiness in detail	Essay is stated in generalities
	Chronological or logical essay structure which leads to a conclusion	Adequate thought structure which has a concluding sentence, but not a formal conclusion	Fallacies in reasoning, lacks conclusion
ORGANIZATION	Sociological ideas and personal facts presented in sequence with correct transitions.	Sociological concepts and personal background details are logically organized.	Essay lacks organization.
	Sociological descriptions of life events are smoothly introduced and lead to a conclusion about one's life.	Sentence and paragraph construction is adequate.	Faulty sentence or paragraph construction.
STYLE	Sentences clearly introduce a sociological concept and clearly present background information.	Accurate, appropriate use of sociological terms and supporting vocabulary.	Vague or incorrectly used sociological terms and or supporting vocabulary.
	Standard English usage	Spelling and punctuation is generally correct.	Frequent errors in spelling and punctuation.

APPENDIX 8

THE COMPONENT PARTS OF AN ESSAY

Title: Students often neglect to furnish adequate titles for their papers, and instructors often dismiss such omissions as insignificant. Yet essays without titles invariably lack focus and direction. Demanding appropriate titles forces students to clarify and to focus their thinking. Insist on good titles; it's worth it.

The title should be short, engaging, and precise. It should consist of a phrase rather than a series of phrases or a lengthy sentence. It should stimulate the reader's curiosity, it should indicate the specific subject of the essay, and it should suggest the point to be made.

Examples:	
Vague (and dull)	An Interesting Theory
Better	Lorenz's Theory of Human Aggression: A Critique
Best	The Fallacy in Lorenz's Theory of Human Nature

Correct usage requires that the first word of a title and all other important words (nouns, pronouns, verbs, adverbs, adjectives, and prepositions that come last or have five or more letters to be capitalized. Titles of student papers should be neither enclosed within quotation marks nor underlined (e.g. italicized).

Introductory Paragraph: The introductory paragraph introduces a general subject then focuses upon a specific aspect of the subject to be explored, to be defined, to be probed, to be analyzed, or to be explained.

A typical introductory paragraph consists of an introduction and a thesis:

1. The introduction, consisting of , say, from one to five sentences, engages the reader's attention by

employing one of the following devices: by relating an interesting anecdote, by citing an arresting quotation, by summarizing a commonly held (or an unusual or a challenging view of a subject, by emphasizing the significance of a topic, its timelessness or its importances), or by using any other attention-getting device. The commentary following the anecdote, quotation, etc., leads up to the thesis.

2. The thesis, usually the last statement (or two) in the introductory paragraph, is the controlling idea of the essay; it defines the topic and delineates the scope of the paper. Since the thesis is the main point that the paper will make, the thesis must have substance and significance. It should never be trivial or commonplace; no one wants to read ideas which are trite or dull. As a further requirement, it is important that the thesis statement be couched in general or universal terms so that the idea contained therein can be developed in subsequent paragraphs.

Examples:	Poor	This year 800,000 tons of acid rain will fall on Chicago and New York.
	Improved	Acid rain is a threat to our cities.

Developmental Paragraphs: The subsequent paragraphs amplify, explain, justify, or otherwise develop the thesis in a logical fashion. Generally speaking, every supporting paragraph begins with a topic sentence. A topic sentence is simply a secondary generalization which ties the supporting details to the thesis. (More often than not, the topic sentence is a restatement of one aspect of the thesis to be developed or supported in the paragraph at hand.) The supporting detail may include the use of facts, reasons, examples, illustrations, or whatever type of information provides relevant and convincing support. Since this section of the essay validates the thesis, it is important that there be enough supporting paragraphs (say,

at least two or three) to give convincing support to the thesis. Essays with too few developing paragraphs will be thin in substance, sketchy, inconclusive; it is also imperative that supporting details be carefully chosen and logically placed. Details listed haphazardly or included without adequate explanation may violate thematic coherence, thematic unity, or both.

1. "Thematic unity" means that every element in the essay relates to the thesis (controlling idea). Irrelevant assertions or asides should be relegated to footnotes or omitted entirely.

2. "Thematic coherence" means that every element in the essay follows logically from that which went before and leads logically up to that which follows. Incoherent writing is often a symptom of disjointed thinking.

Conclusion: The conclusion is a short paragraph or simply a sentence or two with which the essay ends. The conclusion may function in any number of ways. It may restate the thesis in the light of material presented in the developmental paragraphs (and thus represent a summary of basic points). It may suggest important implications growing from ideas explored in the essay proper. It may be a final climactic point that leaves the reader with something to ponder. It may be a quotation that thrusts the reader into some startling channel of thought. Whatever form, however, some type of conclusion is necessary to prevent the essay from ending too abruptly or from trailing off into trivia or insignificance.

PARAGRAPH STRUCTURE

In general, the component elements of the paragraph are as follows:

1. A title which adequately reflects the controlling idea to be developed in the paragraph.

2. An introductory statement which leads up to the controlling idea and which does so in an interesting fashion.

3. A topic sentence which delineates the controlling idea.

4. Appropriate supporting detail which developes the idea embodied in the topic sentence. The supporting detail may include the use of reasons, facts, examples, illustrations, and the like.

5. A concluding sentence which restates the topic sentence or which otherwise ties the paragraph together.

A good paragraph will be unified and coherent.

1. Paragraph unity means that each sentence is related to the controlling idea stated in the topic sentence.

2. Paragraph coherence means that the sentences within the paragraph are logically ordered and are connected by appropriate devices.

STANDARDS OF COMPOSITION

Composition:	Effective presentation of ideas which are logically organized and convincingly developed/supported.
Usage:	Use of correct formal English (avoidance of slang and colloquialisms; correct use of idioms; complete sentences; coherent and logical ordering of the parts of sentences; appropriate use of transitional sentences and phrases).
Grammar:	Grammatically correct sentences (avoidance of dangling and misplaced modifiers; observance of subject-verb agreement; correct pronoun agreement and pronoun reference).
Punctuation:	Correct use of the comma, semicolon, period, etc. (avoidance of comma splices and fused sentences).
Spelling:	Correct spelling of all words used.

ANNOTATED BIBLIOGRAPHY FOR FACULTY

TEACHING WRITING ACROSS THE DISCIPLINES

Fulwiler, Toby and Art Young, eds. Language Connections: Writing and Reading Across the Disciplines. Urbana, IL: NCTE, 1982.

A collection of essays on a variety of topics, among them using writing to teach problem-solving; and responding to writing through peer critiques, teacher-student conferences, and essay evaluation.

Griffin, C. Williams, ed. Teaching Writing in All Disciplines. San Francisco: Jossey-Bass, 1982.

Includes essays on "Using Writing in the Mathematics Class: Theory and Practice," "Coaching the Process of Writing," and "Responding to Student Writing." Some essays suggest writing assignments for science courses.

Lams, Victor. How to Use Writing to Boost Learning Across the Disciplines. Chico, CA: Chico State University, 1982.

A brief (24 pages) pamphlet, the second of a two-part series (see Markland, below), that has some excellent suggestions for inventing assignments, examples of good assignments, advice on marking papers, and a useful discussion entitled "Some Ways of Thinking about Writing."

LeFevre, Karen B. and Mary Jane Dickerson. Until I See What I Say: Teaching Writing in All Disciplines. Burlington,VT: IDC Publication, 1981.

A guide to teaching writing, from choosing topics to responding to papers. Explains how writing enhances learning, how to set goals for student writing, and what the "writing process" is and how to apply the theories to your course.

Maimon, Elaine et al. Writing in the Arts and Sciences. Cambridge, MA: Winthrop Publishers, Inc., 1982.

A textbook from some of the experts in writing across the curriculum. Gives general discussion of the writing process and specific discussion (with models) of writing in the humanities, and the social and natural sciences.

Markland, Murray F., ed. How to Increase Literacy Without Becoming an English Teacher. Chico, CA: California State University, 1981.

First of two-part series (see Lams, above), providing suggestions on marking papers, on "[Being] a Good Reader," on structuring assignments (Why are you having students write? What should their papers accomplish?).

Shaughnessy, Mina P. Errors and Expectations. New York: Oxford University Press, 1977.

First chapter extremely valuable in suggesting how we can become sensitive to and understanding of the problems of poor writers.

Walvoord, Barbara E.F. Helping Students Write Well: A Guide for Teachers in All Disciplines. New York: MLA, 1982

Has chapters on determining how much and what kind of writing to include, helping students define audience and focus topic, responding to disorganized papers, improving student's style. Uses many samples of student papers from courses throughout the disciplines.

PEER EDITING

Hardaway, Francine. "What Students Can Do to Take the Burden Off you," College English, 36 (January 1975), 577-580.

Some practical suggestions for making students act as peer-editors in order to help them develop a sense of audience, and learn what needs revising and how to persist at rewriting to produce clear prose. Also includes some caveats for the teacher.

Harris, Muriel. "Evaluation: The Process for Revision," Basic Writing, 1 (Spring/Summer 1978), 82-90.

Suggests ways to use multiple-drafts and peer editing, including group and individual inquiry techniques, and peer editing sheets ("Which is the best part of the paper? Why? What should be left out, changed, or expanded?"). Emphasizes peer review as a way to make "The teacher's evaluation . . . both easy and quick."

Thompson, Richard. "Peer Grading: Some Promising Advantages for Composition Research and the Classroom," Research in the Teaching of English, 15(2), 172-174.

Research results that indicate students "trained in (evaluating) papers" can write "significantly better essays than students who" are untrained.

Tunnell, Gilbert. "Writing Papers: Multiple Drafts and Peer Review, A Strategy for Improving Undergraduate Writing," Smith [College] Alumnae Quarterly, Spring 1982, pp. 9-12.

Report by a psychology professor at Smith on the results of his experiment using multiple drafts and peer review in one of his classes. Includes data on how well method worked.

EVALUATING AND COMMENTING ON PAPERS

Cooper, Charles and Lee Odell. Evaluating Writing, Urbana, IL: NCTE, 1977.

Essays presenting a variety of ways to evaluate student writing: holistic methods; computer-assisted scoring; measures of syntactical fluency; self-evaluation and peer evaluation.

Judy, Stephen. "Writing for Here and Now; An Approach to Assessing Student Writing," English Journal, 62 (January 1973), 69-79.

Encouragement for the teacher to work as "'Manuscript Manager'," making comments and suggestions on each student's work-in-progress to avoid having students learn after a paper has been graded what they should have done to strengthen the writing.

Larson, Richard. "Training New Teachers of Composition." College Composition and Communication, 17 (October 1966), 152-155.

Unfortunate title for an extremely useful article, showing teachers, new and not so new, what sorts of comments will (or will not) be valuable to their students and why.

Najimy, N.S., ed. Measure for Measure. Urbana, IL: NCTE, 1981

A brief discussion of holistic and analytical methods of evaluation; suggestions about writing assignments; list of common errors; samples of essays with faculty comments. Written especially for instructors in disciplines other than English.

Thomas, Ednah, S. Evaluating Student Themes.

Presents student essays and the teacher's comments, preceded by a brief introduction explaining the principles of responding to papers. The second and third sections of the book will be most helpful.

Barry, Lois. The Busy Professor's Travel Guide to Writing Across the Curriculum. LaGrande, OR: Eastern Oregon State College, 1984.

Grimm, Nancy. "Improving Students' Responses to Their Peers' Essays." College Comp & Comm., 37 (Feb. 1986), 91-94.

Zinsser, William. Writing to Learn. NY: Harper & Row, 1988

Shows writing as a tool that enables people in every discipline to wrestle with facts and ideas...unlike reading it's a physical activity that forces people to put thoughts on paper.

WRITING ACROSS THE CURRICULUM

BRIEF ANNOTATED BIBLIOGRAPHY OF VERY USEFUL ARTICLES

College Composition and Communication May, 1985 and December, 1985

Both issues are devoted to WAC. Included are articles on writing in all disciplines in the humanities, social sciences, sciences, and business and technical fields as well as articles on imaginative language in expository writing. Bibliographies.

Davis, David. "Eight Faculty Members Talk About Student Writing." College Teaching" 35 (1986): 31-35.

Eight faculty members representing a range of disciplines at a large state university participated in a semester-long study of the writing components in their courses. The information presented came from interviews, classroom observations and examination of their course materials. Transcriptions of many of their actual comments in interviews are included; in addition, Mr. Davis presents his own conclusions about the outcomes of the study.

Herrington, Anne J. "Classrooms as Forums for Reasoning and Writing." College Composition and Communication 36 (December, 1985): 404-413.

Writing as a means of learning is the focus of this article. While Ms. Herrington acknowledges that writing in a school community should be different from writing in a professional community, she proposes that we can learn something about the importance of the writer's role and purpose from observing how writing functions in a professional community. Studying two different courses to determine how students perceived writing assignments, Ms. Herrington concludes that for students to see the purpose of writing as anything other than a test of their knowledge, they must see themselves as thinking people exploring real issues and using their writing to inform others about meaningful conclusions.

Kindilien, Glenn. "Reexamining Essay Exams." Teaching English in the Two-Year College (May, 1986): 102-03.

Rexamining essay exams, Mr. Kindilien recommends that the in-class exam should be considered a rough draft which students will revise after the teacher has read it and made suggestions for improving it. He explains how he uses this process in his classes.

Russell, David R. "Writing Across the Curriculum and the Communications Movement: Some Lessons from the Past." College Composition and Communication 38 (May, 1987): 184-94.

Mr. Russell describes WAC programs at Colgate and the University of California at Berkeley. Both programs "died out after more than a decade of successful operation" (184). He concludes that a WAC program must finally be woven into the fabric of an institution if it is to survive. Taking a pragmatic approach, he indicates that the survival of a WAC program depends on its becoming part of an institution-wide plan and acquiring its own funding. Bibliography.

"Writing Programs." The Forum for Liberal Education 7 (October, 1984): 1-20.

With lead articles by Patrick Hartwell and Greg Waters and by Elaine Maimon, this issue comprises reports from more than 20 two- and four-year institutions. Many of the programs are cross-disciplinary. This was the original stimulus for Massasoit's program. Bibliography.

Writing-Across-the-Curriculum: A Bibliography

Writing-Across-the-Curriculum

Barnet, Sylvan. A Short Guide to Writing About Literature Boston: Little, Brown & Co., 1987.

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Bean, John C., Dean Drenk, and F.D. Lee. "Microtheme Strategies for Developing Cognitive Skills." Teaching Writing in All Disciplines SanFrancisco: Jossey-Bass, Inc., Publishers, 1982: 27-38.

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Durkin, Diane Bennett. Writing in the Disciplines New York: Random House, Inc., 1987.

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Freisinger, Randall. "Cross-Disciplinary Writing Workshops: Theory and Practice." College English 42 (October 1980): 154-166.

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